



**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: A7936

Seongmoon WANG

Appln. No.: 09/805,899

Group Art Unit: 2133

Confirmation No.: 3488

Examiner: Shelly A. CHASE

Filed: March 15, 2001

For: LOW HARDWARE OVERHEAD SCAN BASED 3-WEIGHT WEIGHTED RANDOM  
BIST ARCHITECTURES

**SUBMISSION OF FORMAL DRAWINGS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RECEIVED**

JUN 23 2004

Technology Center 2100

Sir:

Submitted herewith please find nine (9) sheets of drawings in compliance with  
37 C.F.R. § 1.84. The Examiner is respectfully requested to acknowledge receipt of these  
drawings.

Respectfully submitted,

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WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: June 21, 2004



	<i>p</i> <sub>1</sub>	<i>p</i> <sub>2</sub>	<i>p</i> <sub>3</sub>	<i>p</i> <sub>4</sub>	<i>p</i> <sub>5</sub>	<i>s</i> <sub>1/0</sub>	<i>s</i> <sub>1/1</sub>	<i>s</i> <sub>2/0</sub>	<i>s</i> <sub>3/1</sub>	<i>s</i> <sub>4/0</sub>	<i>s</i> <sub>4/1</sub>
<i>gen</i> ( <i>C</i> <sup>0</sup> )	1	0	X	1	X	X	1	1	X	X	1
<i>gen</i> ( <i>C</i> <sup>1</sup> )	0	X	1	1	U	1	0	X	1	X	1
<i>gen</i> ( <i>C</i> <sup>2</sup> )	X	0	U	X	X	X	X	1	0	X	X
<i>gen</i> ( <i>C</i> <sup>3</sup> )	0	0	1	0	X	1	0	1	1	1	0
<i>glob_gen</i>	B	0	1	B	N						

GENERATORS (WEIGHT SETS)

OVERRIDING SIGNALS

FIG. 1



	P1	P2	P3	P4	P5	S1/0	S1/1	S2/0	S3/1	S4/0	S4/1
<i>gen(C<sub>0</sub>)</i>	1	0	X	1	X	X	1	1	X	X	1
<i>gen(C<sub>1</sub>)</i>	0	X	1	1	U	1	0	X	1	X	1
<i>gen(C<sub>2</sub>)</i>	X	0	U	X	X	X	X	1	0	X	X
<i>gen(C<sub>3</sub>)</i>	0	0	1	0	X	1	0	1	1	1	0
<i>glob_gen</i>	B	0	1	B	N						

GENERATORS (WEIGHT SETS)

OVERRIDING SIGNALS

FIG. 2

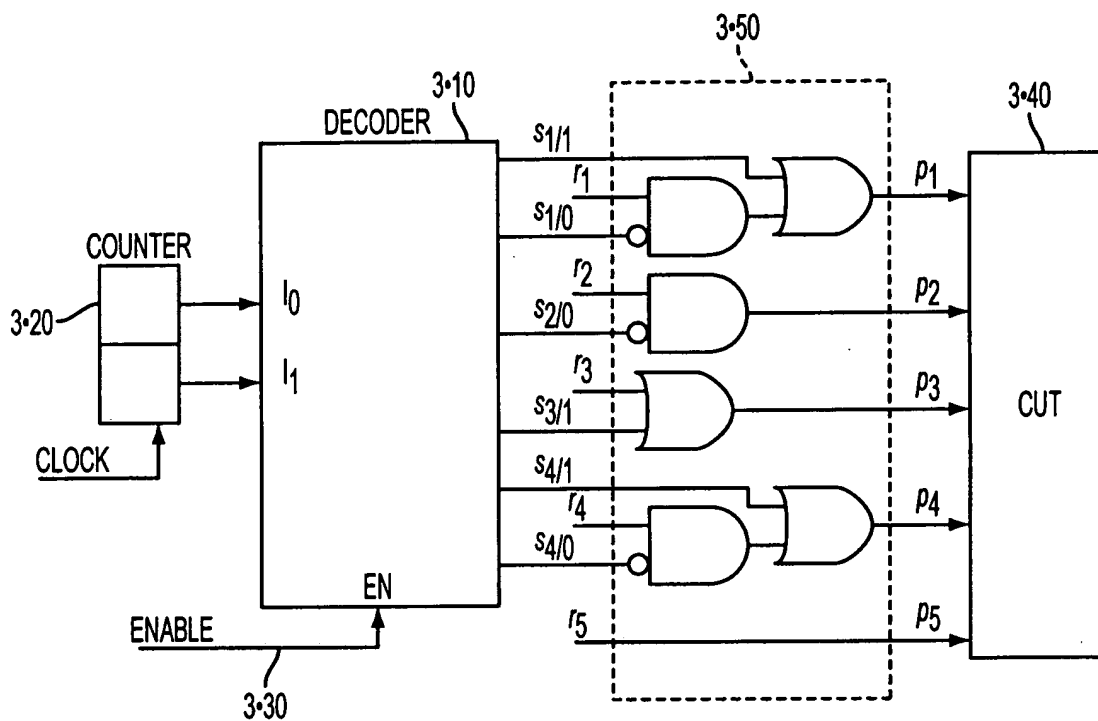


FIG. 3

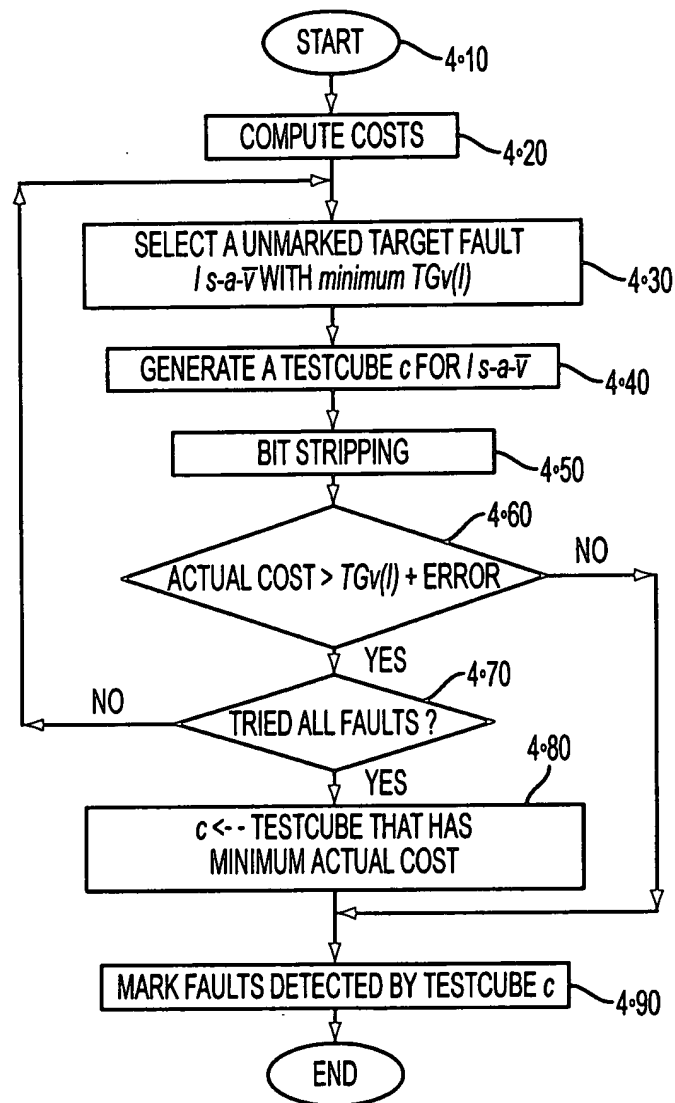


FIG. 4

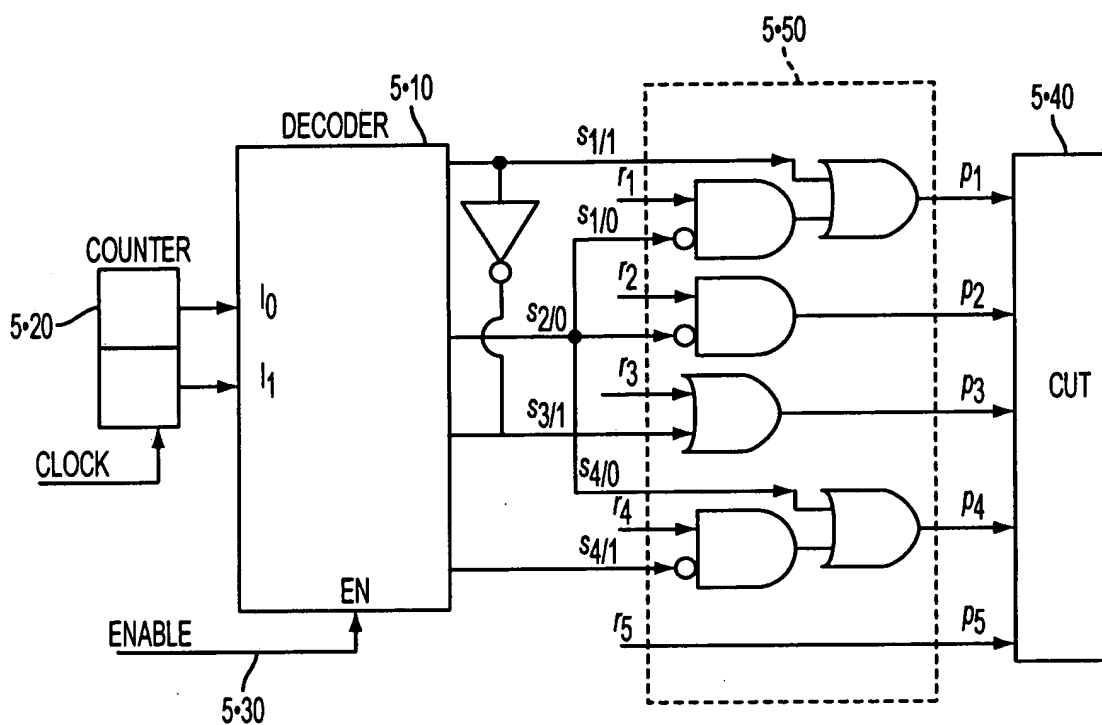


FIG. 5

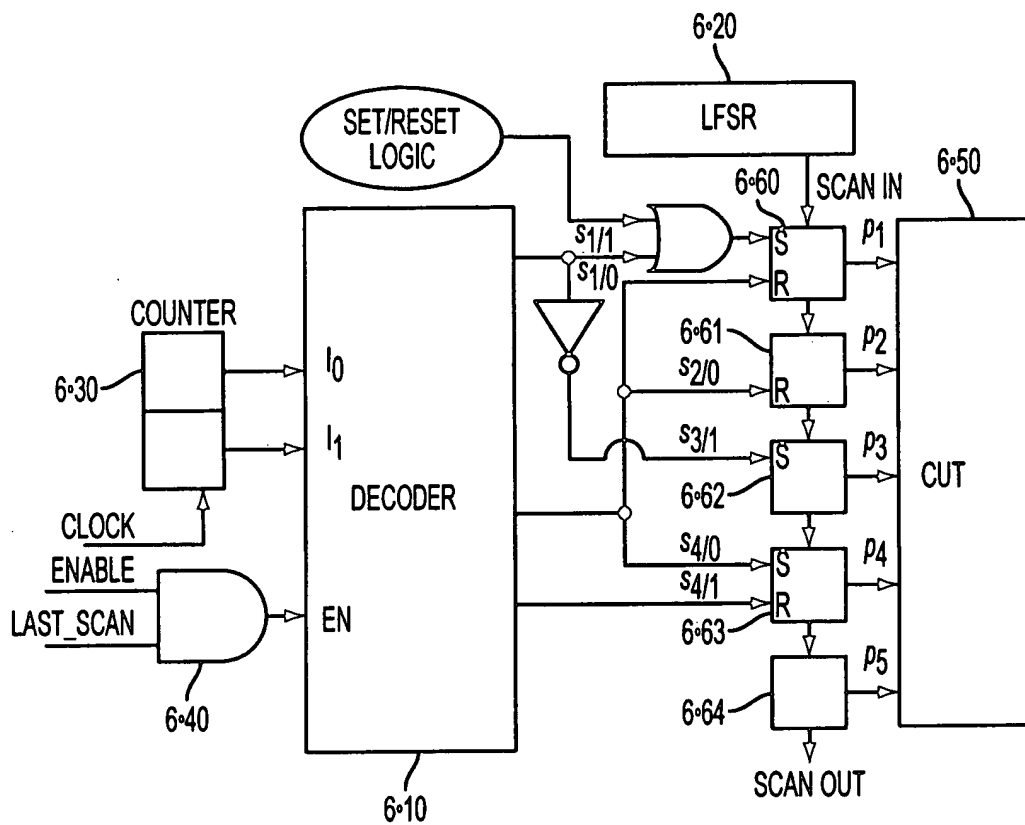


FIG. 6

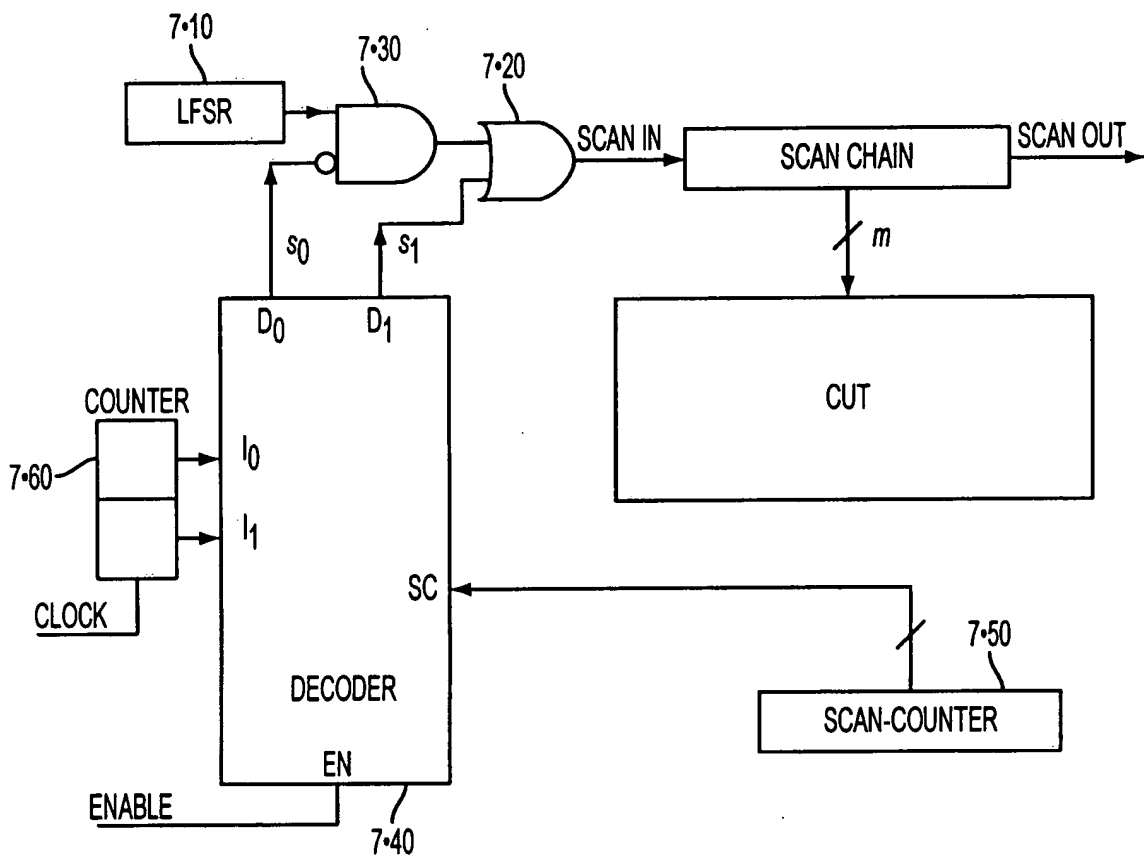


FIG. 7





	$p_0$	$p_1$	$p_2$	$p_3$	$p_4$	$p_5$	$p_6$	$p_7$
$gen(C^0)$	U	0	0	1	0	1	1	X
$gen(C^1)$	0	U	0	0	1	1	X	1

GENERATORS

FIG. 8A

{			$D_0$
	0	001	1
	0	010	1
	0	100	1
	1	000	1
	1	010	1
	1	011	1
	COUNTER	SCAN-COUNTER	
			$D_1$
	0	011	1
	0	101	1
	0	110	1
	1	100	1
	1	101	1
1	111	1	
COUNTER	SCAN-COUNTER		

WITHOUT TOGGLE F/F

FIG. 8B

{			$D_0$
	0	000	1
	0	001	1
	1	001	1
	1	010	1
	COUNTER	SCAN-COUNTER	
			$D_1$
	0	011	1
	0	100	1
	0	101	1
	1	100	1
	COUNTER	SCAN-COUNTER	

WITH TOGGLE F/F

FIG. 8C

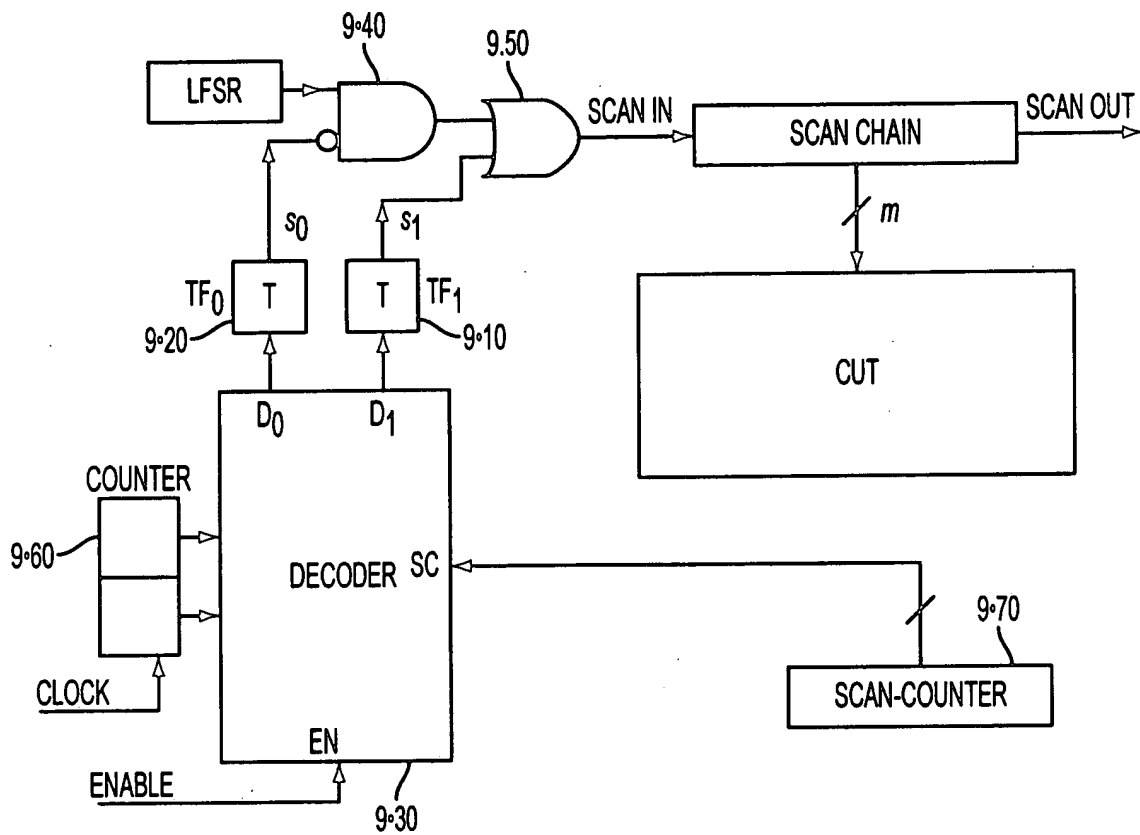


FIG. 9